Notice of Allowability	Application No.	Applicant(s)	
	10/030,527	COCKERILL ET AL.	
	Examiner	Art Unit	
	Bruck Kifle, Ph.D.	1624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *amendments filed 11/03/04*.

2. ☒ The allowed claim(s) is/are *1,2,4-11,13-16,18-22,24,31,32,34,36-39 and 49-51*.

3. ☐ The drawings filed on _____ are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *11/10/04* .
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Bruck Kifle, Ph.D.
Primary Examiner
Art Unit: 1624

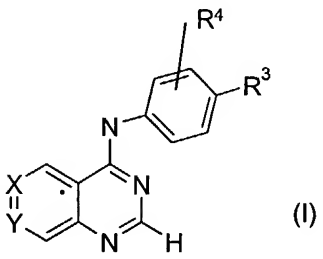
EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. John Lemanowicz on November 10, 2004.

The application has been amended as follows: Please replace the entire claim set with the following:

Claim 1 (Currently Amended): A compound of formula (I)



(I)

or a salt ~~or solvate~~ thereof;

wherein

X is CR^1 and Y is CR^2;
or X is CR^2 and Y is CR^1;

R^1 represents a group $R^5SO_2CH_2CH_2Z\text{-}(CH_2)_p\text{-}Ar\text{-}$, wherein Ar is furan, which may optionally be substituted by one or two halo, $C_{1\text{-}4}$ alkyl or $C_{1\text{-}4}$ alkoxy groups; Z represents O, S, NH or NR^6; p is 1, 2, 3 or 4;

R^5 is $C_{1\text{-}6}$ alkyl substituted by one or more R^8 groups; or

R^5 is C_{1-6} alkyl substituted by a 5 to 10-membered heterocyclic group or a 3 to 10-membered carbocyclic group, each of which may be optionally substituted by one or more R^8 groups; or

R^5 is selected from the group consisting of a 5 to 10-membered heterocyclic group or a 3 to 10-membered carbocyclic group, each of which may be optionally substituted by one or more R^8 groups;

each R^8 is independently selected from halo, hydroxy, C_{1-4} alkoxy, nitrile, NH_2 or NR^6R^7;

R^6 is C_{1-4} alkyl, C_{1-4} alkoxy-C_{1-4}alkyl, hydroxyC_{1-4}alkyl, $CF_3C(O)$ or $CH_3C(O)$;

R^7 is hydrogen or R^6;

R^2 is selected from hydrogen, halo, hydroxy, C_{1-4} alkyl and C_{1-4} alkoxy;

R^3 is selected from pyridylmethoxy, benzyloxy, halo-, dihalo- and trihalobenzyloxy;

R^4 is selected from hydrogen, halogen, C_{1-4} alkyl, C_{2-4} alkynyl or cyano.

Claim 2 (Original): The compound of claim 1, wherein X is CR^1 and Y is CR^2.

Claim 3 (Cancelled):

Claim 4 (Original): The compound of claim 1, wherein R^2 is hydrogen, halogen or C_{1-4} alkoxy.

Claim 5 (Original): The compound of claim 1, wherein R^2 is hydrogen, fluoro or methoxy.

Claim 6 (Original): The compound of claim 1, wherein R^2 is hydrogen or fluoro.

Claim 7 (Original): The compound of claim 1, wherein Z is NH, NR^6 or O.

Claim 8 (Original) The compound of claim 1, wherein Z is NH or O.

Claim 9 (Original): The compound of claim 1, wherein Z is NH.

Claim 10 (Original): The compound of claim 1, wherein p is 1, 2 or 3.

Claim 11 (Original): The compound of claim 1, wherein Ar does not carry any optional substituents.

Claim 12 (Cancelled):

Claim 13 (Original): The compound of claim 1, wherein R^5 is an aromatic heterocyclic or carbocyclic group optionally substituted by a C_{1-4} alkyl group.

Claim 14 (Original): The compound of claim 1, wherein R^5 is pyridyl, phenyl, imidazolyl or N-methylimidazolyl.

Claim 15 (Previously Presented): The compound of claim 1, wherein R^5 is C_{1-6} alkyl substituted by one or more groups selected from halo, hydroxy, C_{1-4} alkoxy, nitrile, NH_2 or NR^6R^7.

Claim 16 (Previously Presented): The compound of claim 1, wherein R^5 is C_{1-6} alkyl substituted by one or more groups selected from hydroxy, C_{1-4} alkoxy, NH_2 or NR^6R^7, wherein R^6 represents C_{1-4} alkyl.

Claim 17 (Cancelled):

Claim 18 (Original): The compound of claim 1, wherein R^3 is benzyloxy or fluorobenzyloxy.

Claim 19 (Original): The compound of claim 1, wherein R^4 is chloro, bromo, or hydrogen.

Claim 20 (Original): The compound of claim 1, wherein R^3 is benzyloxy or 3-fluorobenzyloxy and R^4 is chloro or bromo.

Claim 21 (Previously Presented): The compound of claim 1, wherein Y is CR^2, R^2 is hydrogen, fluoro or methoxy; X is CR^1, Ar is unsubstituted furan; R^3 is benzyloxy or fluorobenzyloxy; and R^4 is hydrogen, chloro or bromo.

Claim 22 (Previously Presented): The compound of claim 1, wherein X is CR^2, R^2 is hydrogen, fluoro or methoxy; Y is CR^1, Ar is unsubstituted furan; R^3 is benzyloxy or fluorobenzyloxy; and R^4 is hydrogen, chloro or bromo.

Claim 23 (Cancelled):

Claim 24 (Previously Presented): The compound of claim 1, wherein Y is CR^2, R^2 is hydrogen, fluoro or methoxy; X is CR^1, Ar is unsubstituted furan; R^3 is fluorobenzyloxy; and R^4 is chloro or bromo.

Claims 25-30 (Cancelled):

Claim 31 (Previously Presented): The compound of claim 1, wherein Y is CR^2, R^2 is hydrogen, fluoro or methoxy; X is CR^1, Ar is unsubstituted furan; R^3 is benzyloxy or fluorobenzyloxy; R^4 is hydrogen, chloro or bromo; and R^5 is pyridine, imidazole, or phenyl.

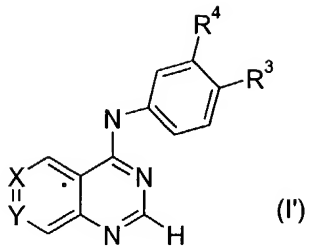
Claim 32 (Previously Presented): The compound of claim 1, wherein X is CR^2, R^2 is hydrogen, fluoro or methoxy; Y is CR^1, Ar is unsubstituted furan; R^3 is benzyloxy or fluorobenzyloxy; R^4 is hydrogen, chloro or bromo; and R^5 is pyridine, imidazole, or phenyl.

Claim 33 (Cancelled):

Claim 34 (Previously Presented): The compound of claim 1, wherein Y is CR^2, R^2 is hydrogen, fluoro or methoxy; X is CR^1, Ar is unsubstituted furan; R^3 is fluorobenzyloxy; R^4 is chloro or bromo; and R^5 is pyridine, imidazole, or phenyl.

Claim 35 (Cancelled):

Claim 36 (Currently Amended): A compound as claimed in claim 1 wherein the compound is a compound of formula (I')



(I')

Claim 37 (Currently Amended): A compound of claim 1 selected from

(4-(3-Fluorobenzyloxy)-3-chlorophenyl)-(6-(2-((2-phenylsulphonyl-ethylamino)- propyl)- furan-2-yl)-quinazolin-4-yl)-amine; and
(4-(3-Fluorobenzyloxy)-3-chlorophenyl)-(6-(2-((2-(2-N-methylimidazolyl)-sulphonyl-ethylamino)-methyl)- furan-2-yl)-quinazolin-4-yl)-amine; or

~~and~~ salts ~~or solvates~~ thereof.

Claim 38 (Currently Amended): A compound of claim 1 selected from

N-{3-chloro-4-[(3-fluorobenzyl)oxy]phenyl}-6-(5-{[2-(phenylsulfonyl)ethoxy]methyl}-2-furyl)-4-quinazolinamine;
(4-(3-Fluorobenzyloxy)-3-chlorophenyl)-(6-(2-((2-phenylsulphonyl-ethylamino)-methyl)- furan-2-yl)-quinazolin-4-yl)-amine;
(4-(3-Fluorobenzyloxy)-3-chlorophenyl)-(6-(2-((2-(2-pyridyl)-sulphonyl-ethylamino)-methyl)-furan-2-yl)-quinazolin-4-yl)-amine;
N-{3-chloro-4-[(3-fluorobenzyl)oxy]phenyl}-6-(5-{[2-(methylsulfonyl)ethoxy]methyl}-2-furyl)-4-quinazolinamine; and
N-{3-chloro-4-[(3-fluorobenzyl)oxy]phenyl}-6-(5-{[2-(vinylsulfonyl)ethoxy]methyl}-2-furyl)-4-quinazolinamine; or

~~and~~ salts ~~or solvates~~ thereof.

Claim 39 (Previously Presented): A pharmaceutical composition, comprising: a therapeutically effective amount of at least one compound as claimed in claim 1 and one or more pharmaceutically acceptable carriers, diluents or excipients.

Claims 40-48 (Cancelled):

Claim 49 (New): A pharmaceutical composition, comprising: a therapeutically effective amount of at least one compound as claimed in claim 36 and one or more pharmaceutically acceptable carriers, diluents or excipients.

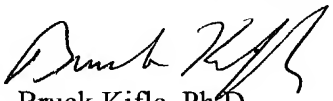
Claim 50 (New) A pharmaceutical composition, comprising: a therapeutically effective amount of at least one compound as claimed in claim 37 and one or more pharmaceutically acceptable carriers, diluents or excipients.

Claim 51 (New): A pharmaceutical composition, comprising: a therapeutically effective amount of at least one compound as claimed in claim 38 and one or more pharmaceutically acceptable carriers, diluents or excipients.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruck Kifle, Ph.D. whose telephone number is 571-272-0668. The examiner can normally be reached Tuesdays to Fridays between 8:30 AM and 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mukund J. Shah can be reached on 571-272-0674. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Bruck Kifle, Ph.D.
Primary Examiner
Art Unit 1624

BK
November 10, 2004